

REMARKS

Independent claims 1 and 14 have been canceled. Likewise, claims 7, 10 and 20-12 have been canceled.

New independent claims 26 and 33 have been added and clarify the claimed subject matter. Also, new dependent claims 27-32 and 34-39 have been added.

Claims 13 and 25 were withdrawn from consideration as the result of a restriction requirement.

Applicant has amended the claims to address the objections raised on page 2 of the Office action and the rejections under section 112, par. 2 identified on pages 3-4 of the Office action. Among other things, the term "abnormal" has been deleted from the claims.

Accordingly, applicant respectfully requests withdrawal of those objections and rejections.

In the Office action, original claims 1-12 and 14-23 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,678,072 (Kobayashi et al.). Claim 24 was rejected under 35 U.S.C. § 103(a) as unpatentable over the Kobayashi et al. patent in view of U.S. Patent No. 5,782,469 (Schoon et al.).

As discussed below, applicant respectfully requests reconsideration and withdrawal of the rejections and allowance of the pending claims.

A claim is anticipated under 35 U.S.C. § 102 only if each and every element as set forth in the claim is found expressly or is inherently described in a single prior art reference. MPEP § 2131.

As explained below, the Kobayashi et al. patent does not disclose each and every feature of any of the pending claims. Furthermore, there would have been no reason to modify the disclosure of the Kobayashi et al. patent, even in view of the Schoon et al. patent, to obtain the subject matter of any of the pending claims.

Independent claim 26 recites a method for use in connection with a document storage cassette comprising a document stacker that includes an actuator. The method includes measuring values of signals each of which is indicative of a load on the actuator during a document stacking operation, comparing information about the measured values to a reference signal profile, and determining whether an expected event has occurred or whether an unexpected event has occurred based on the comparison.

The Kobayashi et al. patent discloses techniques for preventing insertion or acceptance of a bill when the box 12 for accumulating bills becomes full. One way of determining that the box 12 has reached its maximum capacity, according to the Kobayashi et al. patent, is to detect that the load applied to the motor M2 exceeds a predetermined value (col. 4, lines 48-51). That can be accomplished by detecting whether or not a carrier switch S3 remains in an ON state for more than a predetermined period of time (col. 4, lines 51-55). In particular, whether the switch is ON or OFF is simply indicative of whether the motor M2 is in the position shown in FIG. 1. However, when the switch S3 remains ON for more than the predetermined period of time, that indicates that the compression plate 14 has stopped moving in the direction of arrow A, and rotation of the motor M2 is stopped and has not returned to its original position (col. 4, lines 56-59; see FIGs. 1 and 3). Thus, detecting whether or not a carrier switch S3 remains in an ON state for more than a predetermined period of time can be used to determine whether the load on the motor exceeds a predetermined value.

In contrast to claim 26, the Kobayashi et al. patent does not disclose “measuring” values of signals each of which is indicative of a load on the motor M2. The only indication of the load on the motor M2 occurs when the timer T fails to turn OFF after the predetermined time (indicated by the DELAY of 300 ms in FIG. 5) which indicates the load exceeds some predetermined value. However, even in that situation, there is no “measuring” of any signal value. All that is checked is whether the switch S3 is ON or OFF after a specified duration has elapsed. Furthermore, the determination in the Kobayashi et al. patent is made by checking what

occurs at a single time (*i.e.*, after the predetermined time has elapsed). Therefore, even if checking whether the switch S3 is ON or OFF after a specified duration has elapsed were considered to be “measuring” the value of a signal indicative of a load on the motor M2, the Kobayashi et al. patent does not disclose measuring “values of signals . . .” each of which is indicative of a load on the motor during a document stacking operation.

In addition, the Kobayashi et al. patent does not disclose comparing information about the measured values to a reference signal “profile,” as recited in claim 26. Examples of “profiles” of motor current are illustrated by the respective curves in FIGS. 8 and 9 of the pending application. In contrast, the Kobayashi et al. patent makes no comparison to any reference signal “profile.” As already noted, that patent simply discloses checking whether the switch S3 is ON or OFF after the delay of 300 ms has elapsed.

At least for the foregoing reasons, claim 26 should be allowed.

The claims depending from claim 26 also should be allowed at least for the same reasons. Furthermore, each of those claims includes additional features that make those claims independently patentable. Despite the Office action’s repeated reference to col. 4, lines 37-61 of the Kobayashi et al. patent, neither that section nor any other section of that patent discloses the particular features recited in the dependent claims.

For example, claim 27 recites that the reference signal profile is a curve that represents values of actuator current during different phases of stacker operation. There is no disclosure of such a feature in the Kobayashi et al. patent.

Claim 29 recites comparing an actual curve of actuator current to an expected curve of actuator current. There is no disclosure of such a feature in the Kobayashi et al. patent.

Claim 4 recites that determining whether an expected or unexpected event has occurred includes comparing an amount of time that has elapsed between specified measured values of actuator load to a predetermined amount of time. The Kobayashi et al. patent does not disclose comparing an elapsed amount of time to some predetermined amount of time. Instead, that patent simply checks the state of the switch S3 at a predetermined time.

Nor does the Kobayashi et al. patent disclose the features of claims 5 and 6. In particular, the Kobayashi et al. patent does not disclose identifying an amount of time that has elapsed from a specified point in the stacking operation to a peak value of actuator load (claim 5) or identifying an amount of time that has elapsed from a specified point in the stacking operation to a predetermined threshold value of actuator load (claim 6). Instead, the timer T in the Kobayashi et al. patent is set to check the status of the switch S3 at the same time (*i.e.*, after 3 seconds plus the additional delay of 300 ms has elapsed). There is no way for the apparatus of the Kobayashi et al. patent to know or determine the time that has elapsed between the events recited in claims 5 and 6. In particular, following the delay of 300 ms, there is no way for the apparatus of the Kobayashi et al. patent to know when the peak value of actuator load or some predetermined threshold value of actuator load was reached. Thus, the apparatus of the Kobayashi et al. patent does not, and indeed cannot, identify the amount of time that has elapsed from a specified point in the stacking operation to those events. At most, it can implicitly determine that after a certain amount of time has elapsed, the motor M2 has (or has not) returned to its original position.

The Kobayashi et al. patent also does not disclose the features of the other claims depending from claim 26, such as claim 8 ("integrating the measured values of actuator load for a specified time"), claim 11 ("adjusting a reference value") and claim 12 ("distinguish between whether the document cassette is full or whether the stacker is jammed"). Likewise, there is no disclosure of the other claims depending from claim 26.

The Schoon et al. patent does not disclose or suggest the features missing from those claims.

Accordingly, claim 26 and its dependent claims should be allowable.

Independent claim 33 recites an apparatus that includes a document stacker having circuitry operable to measure values of signals indicative of a load on the actuator during a document stacking operation. The apparatus also include circuitry operable to compare information about the measured values to a reference signal profile and to determine whether an

expected event has occurred or whether an unexpected event has occurred based on the comparison.

Claim 33 should be allowable at for reasons similar to those discussed above with respect to claim 26. Likewise, the claims that depend from claim 33 should be allowable for the same reasons and for reasons similar to those discussed above with respect to the dependent method claims which recite similar features.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

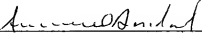
The fee of \$400 for eight extra claims is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any charges or credits to deposit account 06-1050.

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Respectfully submitted,

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